Greater Wellington Water

Operations Group

Operations Group Review of Operations for the Period Ended 31 December 2004

1. Items of Note

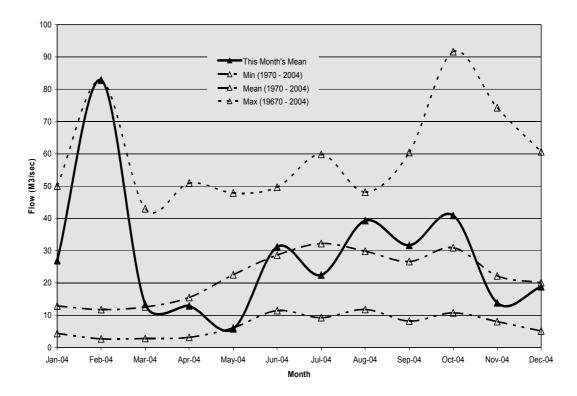
- Lake 2 refilling was completed successfully.
- The vacant Treatment Technician position at Te Marua was eventually filled after the second round of advertising.
- The debate over the proposed *Drinking-Water Standards for New Zealand* changes continues.
- Discussions with Capacity regarding integration of the Region's water and drainage telemetry, and Scada systems have been progressed. Representatives from Capacity and Greater Wellington Water (GWWO) are to meet early in the New Year to discuss the optimum technical solution.

2. Supply Situation

There were no issues with supply for the period.

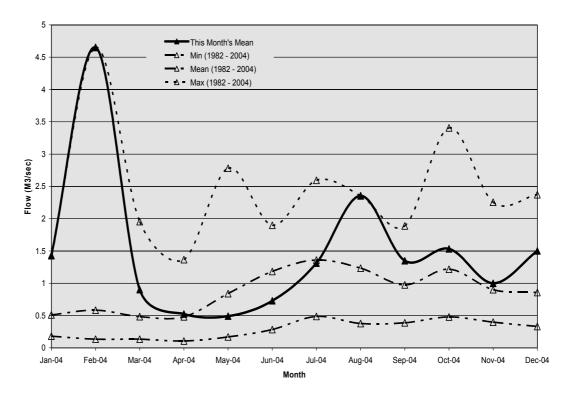
Hutt River Flows

The mean monthly flows in the Hutt River for both November and December were below average.



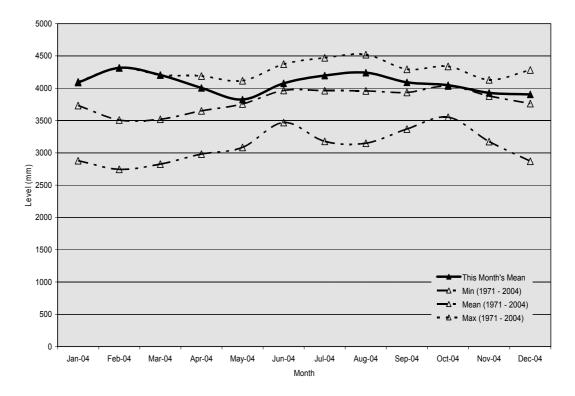
Wainuiomata River Flows

The mean monthly flow in the Wainuiomata River for November was about average. During December the mean monthly flow was above average.



Aquifer Levels

During November the water level in the Waiwhetu aquifer was about average and in December was above average.



3. Treatment Plants

3.1 Wainuiomata

3.1.1 Quality

There were no significant quality issues for the period.

3.1.2 Health and Safety

There were no accidents or incidents for the period

3.1.3 Environmental

- A coagulant bulk tank has developed a minor leak. The leakage is contained within the bunded area and removed by a chemical waste contractor.
- Some overflowing of the float balance tank has been occurring and remedies are being investigated.
- The bulk diesel tank leak testing was carried out by an IQP.

3.1.4 Operations and Maintenance

- The No. 1 air scour blower soft starter failed and had to be replaced.
- We are investigating ways of reducing "float off" volumes from the DAF. If successful, this will lead to an increase in operating efficiency for the treatment plant.
- A backflow preventer was fitted to the micro hydro chamber drain to prevent flooding.
- The Orongorongo power supply inverter was removed for repair.

3.2 Waterloo and Gear Island Water Treatment Plants

3.2.1 Quality

• The occasional incidences of positive coliform results that we were getting at Waterloo in September 2004 have returned. More investigation is required.

3.2.2 Health and Safety

There were no accidents or incidents for the period.

3.2.3 Environmental

• There were no environmental issues for the period.

• The bulk diesel tank leak testing was carried out by an IQP.

3.2.4 Operations and Maintenance

• Following the burn out of Wellington Pump No. 3 motor windings in October, the same type of failure occurred with Pump Motor No. 1 on Boxing Day. Waterloo output to Wellington City has been reduced and water dropped down the gorge to compensate. The rewound No. 3 motor should be back in place in January.

3.3 Te Marua

3.3.1 Quality

• There were no significant quality problems for the period.

3.3.2 Health and Safety

• There are no accidents or incidents to report.

3.3.3 Environmental

• There were no environmental issues for the period.

3.3.4 Operations and Maintenance

• A batch of polyelectrolyte which did not meet acceptable quality standards was delivered and had to be returned to the supplier. Unfortunately the supplier had no more of the product in New Zealand and is trying to source 1,000 litres from Europe. At average plant flows there is sufficient chemical to last until the end of January only. Contingency measures have been put in place to use an alternate, readily available, chemical if delivery from Europe is delayed.

4. Distribution

4.1 Quality

• There are no significant quality issues to report.

4.2 Health and Safety

An employee sprained/strain their trunk. There were no days lost.

4.3 Environmental

• There were no environmental issues for the period.

4.4 Operations and Maintenance

• Johnsonville Pumping Station suffered some minor vandalism.

- The commencement of refurbishment work on exposed pipelines has been delayed by the resource consent application process. Work is expected to start in the New Year.
- The operating level of Gracefield Reservoir was lowered following the failure of structural support bands around the structure. Hutt City Council (HCC) will advise if/when the restriction can be removed.
- The pumping regime for Naenae and Gracefield pumps has been modified whilst HCC replaces a section of pipe.

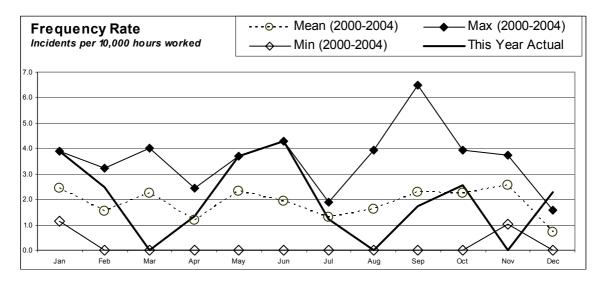
Utility Services Division Health and Safety Data - July 2004 - Total Injuries

Hours worked 2,517 2316 3306 2005 2298 2410 February rate (moidents per 100 workers) 15 5 16 16 16 16 16 16 16 16 16 16 16 16 16	PRODUCTION (+ 4 OPS ADMIN)	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Incidente Days Incidente Days	Hours worked	2,517	2316	3306	2005	2298	2410							
Days lost Chickents per 100 workers) 0 0 0 0 0 0 0 0 0	Employee numbers	15	15	16	16	16	16							
Incidence rate (number of incidents per 10,000 hours exposure)	Incidents	0	0	0	0	0	0							
Frequency rate (incidents per 10,000 hours exposure)	Days lost	0	0	0	0	0	0							
Severity rate (days lost to injury per 10,000 hours worked 1,195 1233 3 et 1407 1325 3 et 1407 1407 1325 3 et 1407 1	Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0							
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Continger Cont	Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0							
Hours worked	DISTRIBUTION	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	October 2004 - Back strain
Incidents Days lost Days	Hours worked	1,195		1861	1307	1407	1325							
Days lost Incidence rate (number of incidents per 100 workers) 0 0 0 0 0 25 0 11	Employee numbers	8	8	9	8	9	9							December 2004 = Sprain/strain to trunk
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Frequency rate (incidents per 10,000 hours exposure)	Days lost	0	0	0	0	0	0							
Severity rate (days lost to injury per 10,000 hours worked)	Incidence rate (number of incidents per 100 workers)	0	0	0	25	0	11							
Note	Frequency rate (incidents per 10,000 hours exposure)	0	0	0	15	0	8							
Note	Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0							
Employee numbers 12 12 12 12 12 12 12 1		Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	July -Sprain/strain trunk
Incidents	Hours worked	1,709	1710	2300	1388	1567	1605							September - Sprain/strain hand
Days lost Incidence rate (number of incidents per 100 workers) 8	Employee numbers	12	12	12	12	12	12							September - Bruising
Incidence rate (number of incidents per 100 workers)	Incidents	1	0	0	0	0	0							
Frequency rate (incidents per 10,000 hours exposure) 6	Days lost	0	0	0	0	0	0							
Severity rate (days lost to injury per 10,000 hours worked)	Incidence rate (number of incidents per 100 workers)	8	0	0	0	0	0							
UTILITY SERVICES SUPPORT	Frequency rate (incidents per 10,000 hours exposure)	6	0	0	0	0	0							
Hours worked 755 784 916 964 1091 1027	Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0							
Hours worked 755 784 916 964 1091 1027	UTILITY SERVICES SUPPORT	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
Incidents 0 0 0 0 0 0 0 0 0	Hours worked	755	784		964	1091	1027							
Days lost 0 0 0 0 0 0 0 0 0	Employee numbers	7	7	7	7	7	7							
Incidence rate (number of incidents per 100 workers) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Incidents	0	0	0	0	0	0							
Frequency rate (incidents per 10,000 hours exposure)	Days lost	0	0	0	0	0	0							
Severity rate (days lost to injury per 10,000 hours worked) 0 0 0 0 0 0 0 0 0	Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0							
LABORATORY Jul Aug Sep Oct Nov Dec Jan Dec Jan Feb Mar Apr May Jun December 2004 = Hit finger Hours worked 1,061 1125 1466 988 1002 1092 1092 Employee numbers 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0							
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Incidence rate (number of incidents per 100 workers) 0 0 0 0 14 Frequency rate (incidents per 10,000 hours exposure) 0 0 0 0 9	Days lost	0	0	0	0		0							
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	,	0	0	0	0	0	9							
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STRATEGY AND ASSET	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	560	612	1096	736	784	748						
Employee numbers	5	5	5	5	5	5						
Incidents	0	0	0	0	0	0						
Days lost	0	0	0	0	0	0						
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0						
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0						
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0						
FORESTRY	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	423	450	572	422	492	542						
Employee numbers	3	3	3	3	3	3						
Incidents	0	0	0	0	0	0						
Days lost	0	0	0	0	0	0						
Incidence rate (number of incidents per 100 workers)	0	0	0	0	0	0						
Frequency rate (incidents per 10,000 hours exposure)	0	0	0	0	0	0						
Severity rate (days lost to injury per 10,000 hours worked)	0	^	0	0	0	^						

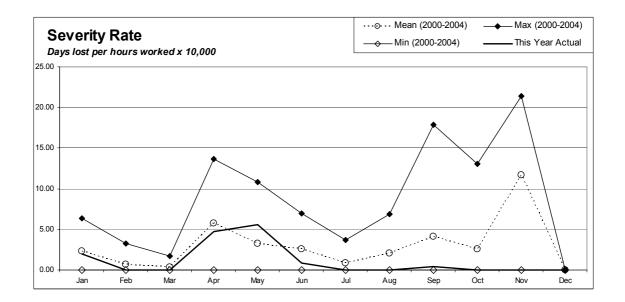
Utility Services Division Combined	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Hours worked	8,219	8229	11516	7809	8641	8749						
Employee numbers	57	57	59	59	59	59						
Injuries	1	0	2	2	0	2						
Days lost	0	0	0.5	0	0	0						
Frequency rate (incidents per 10,000 hours exposure)	1	0	2	3	0	2						
Severity rate (days lost to injury per 10,000 hours worked)	0	0	0	0	0	0						

Incidence rate = (number of incidents/number of employees) x 100
Frequency rate = (number of incidents/person hours worked) x 10,000
Severity rate = (days lost/person hours worked) x 10,000



Incidents

One incident in July 2004
Two incidents in September 2004
Two incidents in October 2004
Two incidents in December 2004



Lost Days

No lost days

Strategy and Asset Group

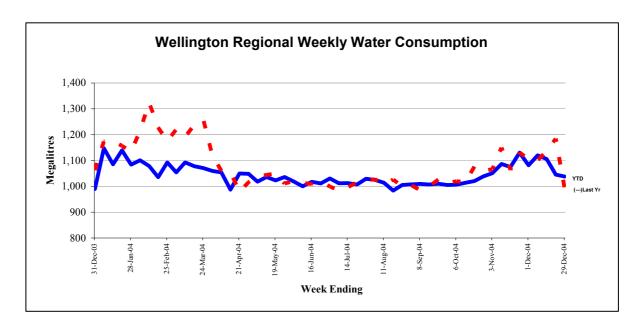
Strategy and Asset Group Review of Operations for the Period Ended 31 December 2004

1. Items of Note

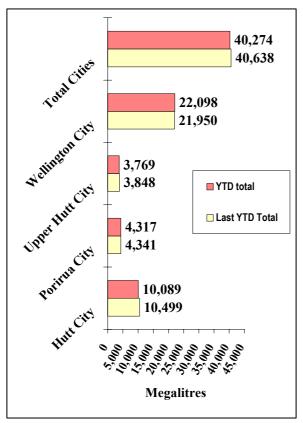
- Details of the summer water conservation information were outlined in a report to the November meeting of the Utility Services Committee. Details of the campaign were finalised but it was decided to postpone the start by one week because of high rainfall and cooler temperatures in the first half of January.
- As the water consumption charts show, summer water usage is down compared with last year. On a year to date basis from 31 March 2004, the total consumption for the four cities is less than last year.
- The Wellington Regional Council (Water Board Functions) Bill has been reported back to the House of Representatives from the Select Committee. The changes are minor and incorporate some of the submissions made by various parties. It is expected that the Bill will be passed in February.
- Drafts of the new *Drinking-Water Standards for New Zealand 2005* are still being issued. It is expected that the introductory date of 1 July 2005 will be met.
- The water supply section of GWRC's web page has been revised slightly in preparation for the complete revision of the GWRC site.
- A report from the consultants investigating which water supply source should be developed next is expected about the end of January. Their brief is also to consider the cost of introducing water metering.
- The preliminary investigation work for a new large reservoir that could be utilised by Wellington City Council (WCC), GWW and Wellington Hospital has been completed. A proposal has been put to the Capital and Coast District Health Board by WCC as the hospital is their customer.
- A favourable response has been received form Watercare Services about entering into a mutual aid agreement for emergency assistance. This will be progressed. Watercare is one of the few water supply organisations in New Zealand with similar large size pipes to those used in Wellington.
- A reasonable size earthquake shook the Wellington area on Friday, 21 January. This triggered the acceleration equipment near the Stuart Macaskill Lakes, which in turn resulted in the lake valves closing automatically. Previously the only way to test the system was by manual intervention. It is pleasing that the equipment operated automatically for the first time when warranted.
- Pipeline damage during the February 2004 storm cost \$52,000 to repair. Government assistance of \$15,800 has now been received.

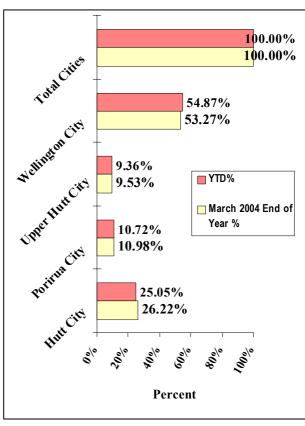
2. Sales Volume

Water Sold Over the Last 12 Months



Water Sold from 31 March to 31 December 2004





3. Asset Management

- The Capital Works budget for 2004/5 is \$5.312 million. The more significant projects included in the Capital Works Programme are:
 - Construction of the Wainuiomata Catchment western boundary fence. Budget \$100,000. Clearing of the fence line is substantially complete and a Contract has been let for the fence construction. Forecast cost \$120,000.
 - Design of seismic strengthening of the Stuart Macaskill Lakes intake towers. Budget \$30,000. The new seismic loading code, which is relevant to this work, was published in December, and this project can now proceed.
 - Rehabilitation of the Wainuiomata Lower Dam and creation of a wetland. Budget \$300,000. A design report has been completed, a resource consent application lodged and preparation of construction documents has begun.
 - Purchase of a spare pump for the Waterloo wellfield (two pumps failed in 2003-2004). Budget \$60,000. Delivery of the pump is expected in February.
 - Further investigation of off-river storage at Wainuiomata. Budget \$100,000. A preliminary feasibility report indicates that the storage of a significant of water is not practicable. A report looking at the justification of this project will be prepared in 2005. In the meantime further investigation work has been deferred.
 - Modifications to Te Marua Water Treatment Plant to facilitate independent treatment of lake and river water. Budget \$200,000. A report and detailed estimate is in preparation by a specialist consultant.
 - Installation of aeration equipment at Waterloo Water Treatment Plant to reduce lime use. Budget \$100,000. New blades to convert the existing mixers into aerators are on order. Aeration will reduce the amount of lime required to be added for pH/alkalinity correction.
 - Relocation of the Kaitoke main on the Silverstream Bridge, including a contribution of \$60,000 to bridge strengthening. Budget \$150,000. Transfund approval has now been received. However, the project has now been delayed and expenditure this year will be minimal.
 - Relocation of the Kaitoke main between State Highways 2 and 58 at Haywards. Budget \$800,000. Design work is proceeding and the pipes have been ordered.
 - New pumping station at Karori Budget \$870,000. Preparation of Contract Documents is close to completion.

- New pumping station at Point Howard. Budget \$367,000. Pumps delivered. Design proceeding. A subdivision consent is awaited from HCC, which has now advised that a resource consent for the pumping station is not required.
- Replacement of obsolete electronic control equipment at Te Marua Pumping Station. Budget \$145,000. Detailed investigation have shown that there are benefits in replacing the motor starters at the same time (see separate half year review report).
- Renewal/upgrade of the telemetry system. Budget \$160,000. Most of this work is on hold pending the outcome of discussions with Capacity to integrate this with Capacity's telemetry.
- NIWA consultants have completed a computer model to predict summer water demand and provide a probability based early warning of possible shortfalls. Trial runs at 1 December and 1 January show a low level of risk, as expected given the high December/January rainfall. Further development of this model to provide an aquifer level forecast and a series of responses should a significant risk be indicated is proposed.
- Flood protection works to minimise the risk of damage to the Wainuiomata raw water main have been designed and some material delivered to site. A section of this main was washed out in the February floods.
- Repairs to the Wainuiomata access bridge damaged in the February floods have been completed by the insurer. A final invoice for costs directly incurred by GWW (e.g., for the Bailey bridge) has been sent to the insurer.
- The proposed reconstruction of a section of State Highway 2 immediately south of the Mangaroa Bridge has been deferred pending financial approval. It will require 150 m of the Kaitoke pipeline to be relocated. Transit New Zealand will meet 50 percent of the cost of this work.
- WCC has selected a consultant to design a new bulk water pumping station to be located near the northern landfill, which is intended to pump water to new reservoirs to be located above Stebbings Valley and in Lincolnshire Farms. This work is part of the Northern Wellington Growth Management Framework. The pumping station will pump water from the Kaitoke wholesale main and, on completion, will become a GWW asset. Therefore, officers are working closely with the consultant to ensure the work meets GWW requirements.
- Discussions have been held with the consultant employed by WCC which is investigating options for the replacement of the Karori Reservoir in Messines Road.

4. Quality Assurance

- Development of revised Drinking-Water Standards is continuing. GWW has a staff member on the Experts Committee considering the changes. Further consultation is expected before the standard is finalised.
- Work on a new proposal by the Ministry for the Environment to establish
 a National Environmental Standard for drinking water sources has been
 delayed following the outcome of consultation meetings. The scope of
 the new Drinking-Water Standards has now been widened to include
 classification of raw water quality.

5. **Environmental**

- A proposal to lower the Wainuiomata Lower Dam spillway is being developed. It has been suggested that the Landcare Division should take future responsibility for the area immediately upstream of the dam in recognition of the recreational opportunities it presents. The Landcare Committee has resolved to consult on possible development options.
- A report certifying full compliance with all consents during the 2003/4 financial year, with the exception of the abstraction consent at Kaitoke where only partial compliance was certified, has been received from the Environment Division. The partial compliance was associated with the spurious recording of high abstraction flows during calibration of the flow meters. A detailed explanation has been submitted to and accepted by the Environment Division. However, the matter has taken some time to resolve, relating in the partial compliance rating. Partial compliance does not imply any adverse environmental effects.

6. Catchment Management

- Planning has commenced for the proposed 1080 operation in the Wainuiomata/Orongorongo Catchment this winter. At this stage the major concern is a number of batches on Department of Conservation land downstream of the catchment on the Orongorongo River.
- The relatively poor weather around Christmas restricted the number of visitors to the Wainuiomata recreation area and similarly resulted in fewer incidents of petty vandalism.
- Three catchment tours took place in November and December. A total of 142 walkers took part in these tours. Further tours are planned for the balance of this financial year.
- The alignment for the catchment boundary fence at Wainuiomata has been cleared and construction should commence early in the New Year.

- Planning is well under way for the creation of a mainland island within the Wainuiomata Catchment. Trap lines are being cleared to enable bait stations to be positioned and replenished as necessary.
- A Contract has been awarded to Vigil to undertake a forest health assessment of both the Hutt and Wainuiomata/Orongorongo Catchments.

7. Marketing

- Water conservation. Further development work was undertaken for the summer water conservation campaign. Copy for two press and two radio advertisements and a tap hanger, for Be the Difference members, was developed. All creative material, with the exception of one press advertisement, was finalised by Christmas. Our water supply customers were updated about the campaign content and media placement. The total campaign is branded Be the Difference and has been developed cooperatively with Communications.
- Annual reporting. The *Water supply annual report 20003/04* was completed in late November. It was adopted by the Utility Services Committee on 30 November 2004.
- Greater Wellington Regional Council's Web Site. A new structure for the water supply content of the new site was agreed with Information Technology. Content from the existing site has been edited and updated, and new content written. A total of 34 pages have been created and populated for the launch of the new site on 1 February 2005.
- Teaching resource for school children in years 3-8. The draft resource was refined following feedback from three groups of teachers and pupils that had agreed to assess it and our plant tour content for us. The study guides promote visiting one of our treatment plants as part of the learning outside the classroom requirement of the national curriculum. Tour guiding training for our plant operators will be arranged for 2005 based on feedback received. The guides are still to be designed and printed before we promote them to teachers.
- Water interpretation signs for Kaitoke and Te Marua were approved, produced and installed during November.
- Treatment Plant Visits. A film crew visited Wainuiomata Water Treatment Plant in November to film a short segment about the water treatment process for the TV3 children's programme *Sticky TV*.
- There were no media releases made during the reporting period.

8. Projects Undertaken by Engineering Consultancy for Strategy and Asset

• Wainuiomata/Orongorongo Catchment Fence

Upgrading the access track and clearing the route for the third stage of the deer and stock fence along the western boundary of the water collection area is complete. An order has been placed for the supply of the posts and netting. Tenders have been invited for erection of the third stage of the fence.

• Wainuiomata Lower Dam

The Wainuiomata Lower Dam is maintained in a semi-drained state. Normal river flows pass through scour pipes beneath the dam. Regular flood flows exceed the capacity of the scour pipes, filling the reservoir behind the dam. This water takes some days to drain. A design report has been prepared recommending lowering the spillway and sealing the scour pipes. A pond and wetland area would be formed in the bed of the reservoir.

• Wainuiomata and Gear Island Road Reseals

Roads at Wainuiomata and Gear Island are being reassessed for resealing.

• Wainuiomata Water Treatment Plant Outlet Control Valve

The proposal for the replacement and relocation of this control valve is being reviewed. Installing a new control valve at Tunnel Grove will reduce the potential for pressure surges in the pipeline. It would prevent air being drawn into the pipe and reduce pumping costs at the Wainuiomata pumping stations.

• Waterloo Well Pump Control Valves

Testing of a replaced Waterloo well pump control valve has confirmed that higher abstraction flows and energy saving have been achieved. Valves have been ordered and arrangements made to replace four further control valves

• State Highway 1 Bridge at Paremata

The new pipeline on the new Paremata Bridge has been commissioned. Final costs are being determined.

Rerouting Te Marua to Karori Pipeline at Haywards

The existing pipeline route from State Highway 2 to the Haywards

Pumping Station is susceptible to earthquake induced landslide damage. The proposed route for a duplicate pipeline is through Transpower land. Transpower has agreed to provide an easement for our pipeline. An order has been placed for the supply of the pipe.

• Emergency Water Supply Points for Upper Hutt City Council

Installation of emergency water supply points to supply water to Upper Hutt City without going through a service reservoir is being investigated.

• Karori Pumping Station

A replacement pumping station located on Northland Tunnel Road is proposed. Resource consent for the construction of the pumping station has been obtained from WCC. The four pumpsets for this pumping station have been ordered. Draft Tender Documents for the construction of the building have been prepared.

Point Howard Pumping Station

The underground pumping station at Hutt Park is being replaced. An application for the construction of the pumping station on the proposed site alongside Seaview Road has been submitted to HCC. The structural design of the building is proceeding. Internal and external pipework is being detailed.

• Minor Seismic Projects

A number of minor seismic protection projects are being attended to. These include:

- Installation of a new line valve on the 525 mm pipeline at Moores Valley Pumping Station is proposed. An order has been placed for the supply of the valve and a precast concrete chamber. Detailed installation drawings have been prepared.
- Installation of standpipes on the bottom entry inlets to service reservoirs is being investigated.

• Wainuiomata River Intake Pipeline

A resource consent has been obtained for the construction of riverbank protection work adjacent to the Wainuiomata River intake pipeline. Rock for this work is being delivered to the site.

Engineering Consultancy Group

Engineering Consultancy Group Review of Operations for the Period Ended 31 December 2004

1. Work Carried Out for the Strategy and Asset Group

The main capital projects for which the Engineering Consultancy Group has responsibility are itemised in the Strategy and Asset Group report. Support is also provided for other projects being undertaken by this group.

2. Work Carried Out for the Operations Group

The Engineering Consultancy Group has continued to provide support for smaller projects arising from the operation and maintenance of the wholesale water supply system.

3. Work Carried Out for Wellington City Council

3.1 General

The work carried out for WCC has picked up in recent months. Current projects under way are detailed in the following sections.

3.2 Rugby, Sussex and Cable Streets

Pipelaying is complete in Rugby and Sussex Streets, with connections under way. Because these are busy streets and partly State Highway, some construction work was carried out at night.

3.3 Aramoana Reservoir, Miramar

There is a storage deficit of 10 ML in the Low Level Zone of Wellington City. Of this storage, approximately 6.5 ML is required in the Eastern Suburbs (Miramar) and 3.5 ML in the Southern Suburbs (Island Bay).

The structure has been completed, tested and chlorinated. Preparations are under way for backfilling to bury the reservoir.

3.4 Mt Albert Reservoir

This 3.5 ML reservoir will be sited in Mount Albert Park within Berhampore Golf Course. Contract Documents are now in the final stage of preparation.

3.5 Warwick Street Pumping Station

This pumping station includes pumpsets for both WCC and GWW, supplied by a common electrical and controls panel. The Engineering Consultancy Group has been commissioned by WCC to arrange for the replacement of the two WCC pumps that deliver to Wadestown Reservoir and the installation of a combined electrical control panel.

Both new pumpsets are in operation and the installation contract is complete. Arrangements are being made for soundproofing of the building.

3.6 Wellington City Council Flow Meters

Arrangements are under way for construction work to commence early in the New Year.

3.7 Automatic Shut-off Valves 2004/5

Contract Documents for the installation of automatic shut-off valves at various locations were prepared and Tenders invited.

3.8 Wakefield and Victoria Street Water Main Renewals

This is a major project which has required significant careful design and planning. Pipelaying on this Contract commenced immediately after Christmas at Cuba Street, working towards Victoria Street. Arrangements were made to co-ordinate the work to minimise the impact from other drainage projects under way at the same time.

4. Miscellaneous Projects

Kapiti Water Supply- Otaihanga Connection

The Engineering Consultancy Group has been engaged to design a connection to the Kapiti trunk main at Otaihanga Road. This new connection will give greater security of the water supply to Paraparaumu and Raumati.

Laboratory Services

Laboratory Services Department Review of Operations for the Period Ended 31 December 2004

1. Items of Note

- Laboratory finances recovered to finish in the black, showing a small surplus for the year to date.
- Extra *Giardia/Cryptosporidium* testing, undertaken for the Operations Group in anticipation of the requirements of the new *Drinking-Water Standards for New Zealand 2005* (draft), provided a welcome supplement to the income.
- Our annual external assessment was carried out in mid-December, with the IANZ auditors recommending a continuation of our laboratory accreditation. This time around it was the triennial full blown version audit and resulted in several non-urgent improvements being earmarked for our attention
- Replacement of the trusty four wheel drive Vitara sampling vehicle was deferred to early 2005, as was the upgrade of the aged *Giardia/Cryptosporidium* microscope. The Sample Manager Laboratory Information Management System update has been arranged for February 2005.
- A busy time as usual for the laboratory, with operations continuing throughout the Christmas/New Year period, including the statutory days and weekends.

2. Business Summary

2.1 Quality

There were no requests for retesting samples and test reports were timely.

2.2 Health and Safety

A minor workplace accident was recorded. However, there was no time lost to injury during this period.

Plantation Forestry

Plantation Forestry Department Review of Operations for the Period Ended 31 December 2004

1. Log Harvest Contract

The focus on the recovery of windthrown logs continued through November and December. The decision was taken towards the end of December to discontinue further windthrow operations, as the level of sapstain damage was too high and most of the significant areas of mature windthrow had been recovered.

Between April and December we have harvested a total of 47,179 tonnes. Had these trees not been recovered prior to the onset of sapstain they would have been unmerchantable and would have been an impediment to future planting.

The markets have remained very fickle with pruned log prices \$60 to \$70 below what I would consider the long-term average price and export grades badly affected the value of the New Zealand dollar and high shipping costs. Within the constraints of the windthrown timber we have tried to concentrate on the domestic sawlog market. Although demand has been variable because of periods of oversupply, it has remained the most stable of all the markets.

Production for November and December was as follows.

Output by Grade - Clarkes Creek/Upper Long Spur

	Nove	mber	December				
Grade	Tonnes	%	Tonnes	%			
Pruned Domestic	72.5	1.82	86.27	2.10			
Pruned Export	0	0	0	0			
Run of Bush	0	0	0	0			
S/A Grade	744.94	18.67	859.61	20.91			
L Grade	322.14	8.07	568.8	13.84			
R Grade	437.23	10.96	337.97	8.22			
K Sawlog	1,670.18	41.86	1380.1	33.57			
Roundwood	0	0	30.34	0.74			
K Rough	487.14	12.21	456.98	11.12			
Pulp							
Xport Pulp	255.36	6.4	390.77	9.51			
O/S Pulp							
Total	3,989.49		4,110.84				

Revenue for the period was:

- \$52,772 at an average of \$13.23 per tonne for November
- \$71,979 at an average of \$17.51 per tonne for December

Output by Grade - Tunnel Gully

	Nove	mber	December				
Grade	Tonnes	%	Tonnes	%			
S/A Grade	665.26	40.35	399.86	36.23			
L Grade							
R Grade	151.39	9.18	117.22	10.62			
K Sawlog	688.47	41.75	474.28	42.97			
K Rough	109.93	6.67	58.1	5.26			
Pulp							
O/S Pulp			43.84	3.97			
Xport Pulp	33.81	2.05	10.5	0.95			
Total	1,648.86		1,103.8				

Revenue for the period was:

- \$46,494 at an average of \$28.20 per tonne for November
- \$27,002 at an average of \$24.46 per tonne for December

Overall harvesting for the period returned:

- \$99,039 at an average of \$17.61 per tonne for November
- \$99,186 at an average of \$19.02 per tonne for December

2. Silviculture Contracts

A further 16 hectares out of a total of 257 hectares were completed in this quarter at a cost of \$7,632.50

The reason that there has been little progress with the planned silviculture to date can be attributed to the contractors being occupied with planting. It is still anticipated that all silviculture will be completed before 30 June 2005.

3. Plantation Forestry Operations

Monitoring contractors has been the predominant activity over these months. Minor weather events have produced a number of small slips but these have been cleared without disruption to the harvesting activities.

With the completion of the windthrow recovery harvesting, all three crews are to move after Christmas and road maintenance on the routes servicing the new sites have been upgraded.

In the New Year we will have crews at Martins in Pakuratahi West, Grattons in Valley View and Harris South at Puketiro.

4. Forest Access

Apart from the nuisance slips mentioned above and the ongoing problem at Maungakotukutuku, access throughout the forest is good. We are planning to open up an old track to give access to Martins block but about 80 percent of the track has satisfactory grades and only need clearing and metalling before use. Special arrangements have been made for the use of part of the rail alignment as access from this harvest. These have been developed in conjunction with the Historic Place Trust.

5. Market Trends

The domestic markets remain reasonably strong but subject to the availability of logs. While the weather remains fine, those blocks only able to be accessed in good weather will continue to place more logs in the market and prevent any likelihood of price increases. This will be particularly so in February when JNL in Masterton are to close down for machinery maintenance.

There is little relief in sight for shipping rates which are predicted to remain in the \$US45 to \$US50 range in the medium future. There are signs that, despite the high dollar, export prices are firming. If the dollar weakens, these prices will translate into much improved returns for the forest owners.